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*Claims*

1. A pacemaker operable in a tracking and a non-tracking mode and having an automatic mode switching function for switching the pacemaker into the non-tracking mode of operation in response to the detection of an atrial tachycardia, said pacemaker including atrial detecting means (8,24) for detecting atrial events, ventricular detecting means (10,26) for detecting ventricular events, an atrial interval determining means (28) for determining an interval between consecutive atrial events, a comparison means for comparing said interval with a predetermined atrial tachycardia limit value for recording a tachy indication if said interval is less than said atrial tachycardia limit value, and a mode switching means (32) for switching the mode of operation to said non-tracking mode when the number of recorded tachy indications reaches a predetermined tachy count limit, characterized in that a cardiac event interval determining means (30) is operable in response to the recordal of a tachy indication to determine additional intervals between cardiac events, detected by said atrial detecting means (8,24) and said ventricular detecting means (10,26), for supply to said comparison means for comparing said additional intervals with said tachycardia limit value and reducing said recorded number of tachy indications by one non-tachy indication, if at least one of said additional intervals during a pacemaker interval between two consecutive ventricular stimulations or R-wave detections is longer than said tachycardia limit value.

2. The pacemaker according to claim 1, characterized in that said cardiac event interval determining means (30) is operable to determine all intervals between cardiac events, detected by said atrial detecting means (8,24) and said ventricular detecting means (10,26) in a pacemaker interval.

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3. The pacemaker according to claim 1 or 2, characterized in that said atrial detecting means (8,24) comprise a P wave detector for detecting ordinary P waves and an atrial tachycardia detector of higher sensitivity for monitoring atrial tachycardia signals.

4. The pacemaker according to any one of the preceding claims, characterized in that said mode switching means (32) comprises an up/down counter (98) which is adapted to be counted up by one for each tachy indication and counted down by one for each non-tachy indication.

5. The pacemaker according to any one of the preceding claims, characterized in that said determining and comparison means comprise counters (28,30) which are started by a detected cardiac event to count clock pulses until a pre-set value is reached, corresponding to said predetermined tachycardia limit value, or a stop event is detected by said atrial detecting means (8,24) or said ventricular detecting means (10,26).

6. The pacemaker according to claim 4, the pacemaker being operable in said non-tracking mode, characterized in that said mode switching means is adapted to switch mode of operation back to the tracking mode when its tachy indication counter is counted down by a predetermined number from said predetermined tachy count limit.

7. The pacemaker according to claim 4, the pacemaker being operable in said non-tracking mode, characterized in that said mode switching means (32) is adapted to switch mode of operation back to the tracking mode when its tachy indication counter (98) is counted down to zero.

8. The pacemaker according to any one of the preceding claims, characterized in that said non-tracking mode of operation is a DDI mode.

9. The pacemaker according to any one of the preceding claims, characterized in that a means (18,20) is provided for changing the AV interval in order to uncover possible atrial events covered by the ventricular blanking period.

5 10. The pacemaker according to claim 9, characterized in that said means (18,20) for changing the AV interval is operable to shorten the AV interval in response to the detection of a decrease of the pacemaker interval below a predetermined limit, preferably equal to twice the atrial  
10 tachycardia limit value.

11. The pacemaker according to any one of the preceding claims, the stimulation rate being equal to a base rate in case of failing heart activity, characterized in that said base rate is sensor controlled.

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